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- <110> Greenwald, Iva Levitan, Diane
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- <141> 1998-03-27
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Tyr Ser Ser Gly Val Ile Tyr Pro Tyr Val Leu Val Thr Ala Val Glu 260 265 270

Asn Thr Thr Asp Pro Arg Glu Pro Thr Ser Ser Asp Ser Asn Thr Ser 275 280 285

Thr Ala Phe Pro Gly Glu Ala Ser Cys Ser Ser Glu Thr Pro Lys Arg 290 295 300

Pro Lys Val Lys Arg Ile Pro Gln Lys Val Gln Ile Glu Ser Asn Thr 305 310 315 320

Thr Ala Ser Thr Thr Gln Asn Ser Gly Val Arg Val Glu Arg Glu Leu 325 330 335

Ala Ala Glu Arg Pro Thr Val Gln Asp Ala Asn Phe His Arg His Glu 340 345 350

Glu Glu Glu Arg Gly Val Lys Leu Gly Leu Gly Asp Phe Ile Phe Tyr 355 360 365

Ser Val Leu Leu Gly Lys Ala Ser Ser Tyr Phe Asp Trp Asn Thr Thr 370 375 380

Ile Ala Cys Tyr Val Ala Ile Leu Ile Gly Leu Cys Phe Thr Leu Val 385 390 395 400

Leu Leu Ala Val Phe Lys Arg Ala Leu Pro Ala Leu Gln Phe Pro Phe 405 410 415

Ser Pro Asp Ser Phe Phe Thr Phe Val Pro Ala Gly Ser Ser Pro His 420 425 430

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Leu Pro Phe Leu Cys Ile Ile Asn Phe Ser Ile Ile Ser 450 455 460

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Arg Glu Arg Gln Glu His Asn Asp Arg Arg Ser Leu Gly His Pro Glu 35 40 45

Pro Leu Ser Asn Gly Arg Pro Gln Gly Asn Ser Arg Gln Val Val Glu 50 55 60

Gln Asp Glu Glu Asp Glu Glu Leu Thr Leu Lys Tyr Gly Ala Lys 65 70 75 . 80

His Val Ile Met Leu Phe Val Pro Val Thr Leu Cys Met Val Val Val 85 90 95

Val Ala Thr Ile Lys Ser Val Ser Phe Tyr Thr Arg Lys Asp Gly Gln
100 105 110

Leu Ile Tyr Thr Pro Phe Thr Glu Asp Thr Glu Thr Val Gly Gln Arg 115 120 125

Ala Leu His Ser Ile Leu Asn Ala Ala Ile Met Ile Ser Val Ile Val .130 135 140

Val Met Thr Ile Leu Leu Val Val Leu Tyr Lys Tyr Arg Cys Tyr Lys 145 150 155 160

Val Ile His Ala Trp Leu Ile Ile Ser Ser Leu Leu Leu Leu Phe Phe 165 170 175

Phe Ser Phe Ile Tyr Leu Gly Glu Val Phe Lys Thr Tyr Asn Val Ala 180 185 190

Val Asp Tyr Val Thr Val Ala Leu Leu Ile Trp Asn Phe Gly Val Val 195 200 205 48231A_pctus_SEQLIST.ST25
Gly Met Ile Ser Ile His Trp Lys Gly Pro Leu Arg Leu Gln Gln Ala
210 215 220 Tyr Leu Ile Met Ile Ser Ala Leu Met Ala Leu Val Phe Ile Lys Tyr 225 230 240 Leu Pro Glu Trp Thr Ala Trp Leu Ile Leu Ala Val Ile Ser Val Tyr 245 250 255 Asp Leu Val Ala Val Leu Cys Pro Lys Gly Pro Leu Arg Met Leu Val 260 265 270 Glu Thr Ala Gln Glu Arg Asn Glu Thr Leu Phe Pro Ala Leu Ile Tyr 275 280 285 Ser Ser Thr Met Val Trp Leu Val Asn Met Ala Glu Gly Asp Pro Glu 290 295 300 Ala Gln Arg Arg Val Ser Lys Asn Ser Lys Tyr Asn Ala Glu Ser Thr 305 310 315 320 Glu Arg Glu Ser Gln Asp Thr Val Ala Glu Asn Asp Asp Gly Gly Phe 325 330 335 Ser Glu Glu Trp Glu Ala Gln Arg Asp Ser His Leu Gly Pro His Arg 340 345 350 Ser Thr Pro Glu Ser Arg Ala Ala Val Gln Glu Leu Ser Ser Ile 355 360 365 Leu Ala Gly Glu Asp Pro Glu Glu Arg Gly Val Lys Leu Gly Leu Gly 370 380 Asp Phe Ile Phe Tyr Ser Val Leu Val Gly Lys Ala: Ser Ala Thr Ala 385 390 395 400 Ser Gly Asp Trp Asn Thr Thr Ile Ala Cys Phe Val Ala Ile Leu Ile 405 410 415Gly Leu Cys Leu Thr Leu Leu Leu Leu Ala Ile Phe Lys Lys Ala Leu 420 425 430 Pro Ala Leu Pro Ile Ser Ile Thr Phe Gly Leu Val Phe Tyr Phe Ala 435 440 445 Thr Asp Tyr Leu Val Gln Pro Phe Met Asp Gln Leu Ala Phe His Gln 450 460 Phe Tyr Ile 465

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Glu Gly Lys Ser Pro Ser Asn Thr Glu Arg Xaa Val Ile Met Leu Phe $1 \hspace{1cm} 5 \hspace{1cm} 10 \hspace{1cm} 15$

Val Pro Val Thr Leu Cys Met Ile Val Val Ala Thr Ile Lys Ser 20 -25 30

Val Arg Phe Tyr Thr Glu Lys Asn Gly Gln Leu Ile Tyr Thr Pro Phe 35 . 40 45

Thr Glu Asp Thr Pro Ser Val Gly Gln Arg Leu Leu Asn Ser Val Leu 50 60

Asn Thr Leu Ile Met Ile Ser Val Ile Val Val Met Thr Ile Phe Leu 65 70 75 80

Val Val Leu Tyr Lys Tyr Arg Cys Tyr Lys Phe Ile His Gly Trp Leu 85 90 95

Ile Met Ser Ser Leu Met Leu Leu Phe Leu Phe Thr Tyr Ile Tyr Leu $100 \hspace{1.5cm} 105 \hspace{1.5cm} 110$

Gly Glu Val Leu Lys Thr Tyr Asn Val Ala Met Asp Tyr Pro Thr Leu 115 120 125

Leu Leu Thr Val Trp Glu Leu Arg Gly Ser Gly His Gly Val His Pro 130 135 140.

48231A_pctus_SEQLIST.ST25 Leu Glu Gly Ala Phe Gly Ala Ala Glu Ala Tyr Leu Ser 145 150 155

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<213> C. elegans

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<223> Fig. 2A SPE-4

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Leu Arg Trp Thr Leu Phe Ser Val Ile Ala Asn Met Ser Leu Thr Leu 20 25 30

Ser Ile Trp Ile Gly Val Tyr Asn Met Glu Val Asn Ser Glu Leu Ser 35 40 45

Lys Thr Tyr Phe Leu Asp Pro Ser Phe Glu Gln Thr Thr Gly Asn Leu 50 60

Leu Leu Asp Gly Phe Ile Asn Gly Val Gly Thr Ile Leu Val Leu Gly 65 70 75 80

Cys Val Ser Phe Ile Met Leu Ala Phe Val Leu Phe Asp Phe Arg Arg 85 90 95

Ile Val Lys Ala Trp Leu Thr Leu Ser Cys Leu Leu Ile Leu Phe Gly $100 \hspace{1cm} 105 \hspace{1cm} 110$

Val Ser Ala Gln Thr Leu His Asp Met Phe Ser Gln Val Phe Asp Gln
115 120 125

Asp Asp Asn Asn Gln Tyr Tyr Met Thr Ile Val Leu Ile Val Val Pro 130 135 140

Thr Val Val Tyr Gly Phe Gly Gly Ile Tyr Ala Phe Phe Ser Asn Ser 145 150 155 160

Page 7

6

Ser Leu Ile Leu His Gln Ile Phe Val Val Thr Asn Cys Ser Leu Ile 165 170 175 Ser Val Phe Tyr Leu Arg Val Phe Pro Ser Lys Thr Thr Trp Phe Val 180 185 190 Leu Trp Ile Val Leu Phe Trp Asp Leu Phe Ala Val Leu Ala Pro Met 195 200 205 Gly Pro Leu Lys Lys Val Gln Glu Lys Ala Ser Asp Tyr Ser Lys Cys 210 220 Val Leu Asn Leu Ile Met Phe Ser Ala Asn Glu Lys Arg Leu Thr Ala 225 230 235 240 Gly Ser Asn Glu Glu Glu Thr Asn Glu Gly Glu Glu Ser Thr Ile Arg 245 250 255 Arg Thr Val Lys Gln Thr Ile Glu Tyr Tyr Thr Lys Arg Glu Ala Gln 260 265 270 Asp Asp Glu Phe Tyr Gln Lys Ile Arg Gln Arg Arg Ala Ala Ile Asn 275 280 285 Pro Asp Ser Val Pro Thr Glu His Ser Pro Leu Val Glu Ala Glu Pro 290 295 300 Ser Pro Ile Glu Leu Lys Glu Lys Asn Ser Thr Glu Glu Leu Ser Asp 305 310 315 320 Asp Glu Ser Asp Thr Ser Glu Thr Ser Ser Gly Ser Ser Asn Leu Ser 325 330 335 Ser Ser Asp Ser Ser Thr Thr Val Ser Thr Ser Asp Ile Ser Thr Ala 340 345 350 Glu Glu Cys Asp Gln Lys Glu Trp Asp Asp Leu Val Ser Asn Ser Leu 355 360 365 Pro Asn Asn Asp Lys Arg Pro Ala Thr Ala Ala Asp Ala Leu Asn Asp 370 375 380 Gly Glu Val Leu Arg Leu Gly Phe Gly Asp Phe Val Phe Tyr Ser Leu 385 390 395 400 Leu Ile Gly Gln Ala Ala Ser Gly Cys Pro Phe Ala Val Ile Ser 405 410 415 Page 8

Ala Ala Leu Gly Ile Leu Phe Gly Leu Val Val Thr Leu Thr Val Phe 420 425 430

Ser Thr Glu Glu Ser Thr Thr Pro Ala Leu Pro Leu Pro Val Ile Cys 435 440 445

Gly Thr Phe Cys Tyr Phe Ser Ser Met Phe Phe Trp Glu Gln Leu Tyr 450 455 460

Gly 465

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gcgctgattt	attcgtctgg	agtcatctat	ccctacgttc	ttgttactgc	agttgaaaac	840
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tttccatttt	ctccggactc	attttttact	tttgtacccg	ctggatcatc	accccatttg	1320
ttacacaagt	ctctcaaaag	tgtttattat	attaattctc	tgtťtttgcc	atttctttgc	1380
atcatcaact	tttcgattat	atcttgagcg	atctcaaagc	tttattttac	atacctattt	1440
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Thr His Thr Val Tyr Gly Thr Asn Leu Ile Thr Asn Arg Asn Ser Gln 20 25 30

Glu Asp Glu Asn Val Val Glu Glu Ala Glu Leu Lys Tyr Gly Ala Ser 35 40 45

His Val Ile His Leu Phe Val Pro Val Ser Leu Cys Met Ala Leu Val 50 55 60

Val Phe Thr Met Asn Thr Ile Thr Phe Tyr Ser Gln Asn Asn Gly Arg 65 70 75 80 Page 10

His Leu Leu Ser His Pro Phe Val Arg Glu Thr Asp Ser Ile Val Glu 85 90 95 Lys Gly Leu Met Ser Leu Gly Asn Ala Leu Val Met Leu Cys Val Val 100 105 110Val Leu Met Thr Val Leu Leu Ile Val Phe Tyr Lys Tyr Lys Phe Tyr 115 120 125 Lys Leu Ile His Gly Trp Leu Ile Val Ser Ser Phe Leu Leu Leu Phe 130 140 Leu Phe Thr Thr Ile Tyr Val Gln Glu Val Leu Lys Ser Phe Asp Val 145 150 155 160 Ser Pro Ser Ala Leu Leu Val Leu Phe Gly Leu Gly Asn Tyr Gly Val 165 170 175 Leu Gly Met Met Cys Ile His Trp Lys Gly Pro Leu Arg Leu Gln Gln 180 185 190 Phe Tyr Leu Ile Thr Met Ser Ala Leu Met Ala Leu Val Phe Ile Lys 195 200 205 Tyr Leu Pro Glu Trp Thr Val Trp Phe Val Leu Phe Val Ile Ser Val 210 215 220 Trp Asp Leu Val Ala Val Leu Thr Pro Lys Gly Pro Leu Arg Tyr Leu 225 230 235 240 Val Glu Thr Ala Gln Glu Arg Asn Glu Pro Ile Phe Pro Ala Leu Ile 245 250 255 Tyr Ser Ser Gly Val Ile Tyr Pro Tyr Val Leu Val Thr Ala Val Glu 260 265 270 Asn Thr Thr Asp Pro Arg Glu Pro Thr Ser Ser Asp Ser Asn Thr Ser 275 280 . 285 Thr Ala Phe Pro Gly Glu Ala Ser Cys Ser Ser Glu Thr Pro Lys Arg 290 295 300 Pro Lys Val Lys Arg Ile Pro Gln Lys Val Gln Ile Glu Ser Asn Thr 305 310 315 Thr Ala Ser Thr Thr Gln Asn Ser Gly Val Arg Val Glu Arg Glu Leu Page 11

Ala Ala Glu Arg Pro Thr Val Gln Asp Ala Asn Phe His Arg His Glu 340 345 350

Glu Glu Glu Arg Gly Val Lys Leu Gly Leu Gly Asp Phe Ile Phe Tyr 355 360 365

Ser Val Leu Gly Lys Ala Ser Ser Tyr Phe Asp Trp Asn Thr Thr 370 380

Ile Ala Cys Tyr Val Ala Ile Leu Ile Gly Leu Cys Phe Thr Leu Val 385 390 395

Leu Leu Ala Val Phe Lys Arg Ala Leu Pro Ala Leu Gln Phe Pro Phe 405. 410 415

Ser Pro Asp Ser Phe Phe Thr Phe Val Pro Ala Gly Ser Ser Pro His 420 425 430

Leu Leu His Lys Ser Leu Lys Ser Val Tyr Tyr Ile Asn Ser Leu Phe 435 440 445

Leu Pro Phe Leu Cys Ile Ile Asn Phe Ser Ile Ile Ser 450 455 460

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- <223> primer or probe
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- <221> misc_feature
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- <223> Fig. 2A E5-1/STM2
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- Arg Thr Ser Leu Met Ser Ala Glu Ser Pro Thr Pro Arg Ser Cys Gln 20 25 30
- Glu Gly Arg Gln Gly Pro Glu As \dot{p} Gly Glu Asn Thr Ala Gln Trp Arg 35 40 45
- Ser Gln Glu Asn Glu Glu Asp Gly Glu Glu Asp Pro Asp Arg Tyr Val 50 60

Cys Ser Gly Val Pro Gly Arg Pro Pro Gly Leu Glu Glu Glu Leu Thr Leu Lys Tyr Gly Ala Lys His Val Ile Met Leu Phe Val Pro Val Thr 85 90 95 Leu Cys Met Ile Val Val Ala Thr Ile Lys Ser Val Arg Phe Tyr 100 105 110 Thr Glu Lys Asn Gly Gln Leu Ile Tyr Thr Pro Phe Thr Glu Asp Thr 115 120 125 Pro Ser Val Gly Gln Arg Leu Leu Asn Ser Val Leu Asn Thr Leu Ile 130 140 Met Ile Ser Val Ile Val Val Met Thr Ile Phe Leu Val Val Leu Tyr 145 150 155 160 Lys Tyr Arg Cys Tyr Lys Phe Ile His Gly Trp Leu Ile Met Ser Ser 165 170 175 Leu Met Leu Leu Phe Leu Phe Thr Tyr Ile Tyr Leu Gly Glu Val Leu 180 185 190 Lys Thr Tyr Asn Val Ala Met Asp Tyr Pro Thr Leu Leu Leu Thr Val 195 200 205 Trp Asn Phe Gly Ala Val Gly Met Val Cys Ile His Trp Lys Gly Pro 210 215 220 Leu Val Leu Gln Gln Ala Tyr Leu Ile Met Ile Ser Ala Leu Met Ala 225 230 235 240 Leu Val Phe Ile Lys Tyr Leu Pro Glu Trp Ser Ala Trp Val Ile Leu 245 250 255 Gly Ala Ile Ser Val Tyr Asp Leu Val Ala Val Leu Cys Pro Lys Gly 260 265 270 Pro Leu Arg Met Leu Val Glu Thr Ala Gln Glu Arg Asn Glu Pro Ile 275 280 285 Phe Pro Ala Leu Ile Tyr Ser Ser Ala Met Val Trp Thr Val Gly Met 290 295 300 Ala Lys Leu Asp Pro Ser Ser Gln Gly Ala Leu Gln Leu Pro Tyr Asp 305 310 315 320 Page 14

Pro Glu Met Glu Glu Asp Ser Tyr Asp Ser Phe Gly Glu Pro Ser Tyr 325 330 335

Pro Glu Val Phe Glu Pro Pro Leu Thr Gly Tyr Pro Gly Glu Glu Leu 340 345 350

Glu Glu Glu Glu Arg Gly Val Lys Leu Gly Leu Gly Asp Phe Ile 355 360 365

Phe Tyr Ser Val Leu Val Gly Lys Ala Ala Ala Thr Gly Ser Gly Asp 370 380

Trp Asn Thr Thr Leu Ala Cys Phe Val Ala Ile Leu Ile Gly Leu Cys 385 390 395

Leu Thr Leu Leu Leu Leu Ala Val Phe Lys Lys Ala Leu Pro Ala Leu 405 410 415

Pro Ile Ser Thr Thr Phe Gly Leu Ile Phe Tyr Phe Ser Thr Asp Asn 420 425 430

Leu Val Arg Pro Phe Met Asp Thr Leu Ala Ser His Gln Leu Tyr Ile 435 440 445

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